

ABSTRACT OF THE DISCLOSURE

A polarization independent tunable optical filter comprises an inherently
5 polarization sensitive angle-tuned filter element and polarization-maintaining multi-pass
optics for directing a light beam to and fro through the tunable filter element while
maintaining its linear state of polarization. An optical spectrum analyzer apparatus
comprises such a tunable optical filter in combination with a polarization control unit for
decomposing a light beam for analysis into first and second beams having mutually
10 orthogonal states of polarization (SOPs) and then adjusting one or both SOPs so that they
are parallel to each other and to one of the principal axes of an inherently polarization
sensitive angle-tuned filter which selects different wavelengths of the first and second
light beams. The light beams are passed through the filter repeatedly by multi-pass
polarization-maintaining optics.

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